

=> d his

(FILE 'HOME' ENTERED AT 11:12:45 ON 18 JUL 2003) ✓

FILE 'EUROPATFULL, PATDPAFULL, PCTFULL, RDISCLOSURE, USPATFULL, USPAT2'  
ENTERED AT 11:23:20 ON 18 JUL 2003

E SABINSA/PA

L1 27 S E3-E5  
L2 9 S L1 AND BOSWELL?  
E SAFAYHI/IN  
L3 10 S E3-E6  
L4 6 S L3 AND BOSWEL?

FILE 'CAPLUS' ENTERED AT 11:49:27 ON 18 JUL 2003

L5 1 S W09001937/PN  
SELECT L5 1 RN  
L6 2395 S E1-E5

FILE 'REGISTRY' ENTERED AT 11:50:06 ON 18 JUL 2003

L7 1 S 129555-49-3/RN  
SET NOTICE 1 DISPLAY  
SET NOTICE LOGIN DISPLAY

FILE 'REGISTRY' ENTERED AT 11:50:49 ON 18 JUL 2003

L8 1 S 5968-70-7/RN  
SET NOTICE 1 DISPLAY  
SET NOTICE LOGIN DISPLAY

FILE 'REGISTRY' ENTERED AT 11:51:19 ON 18 JUL 2003

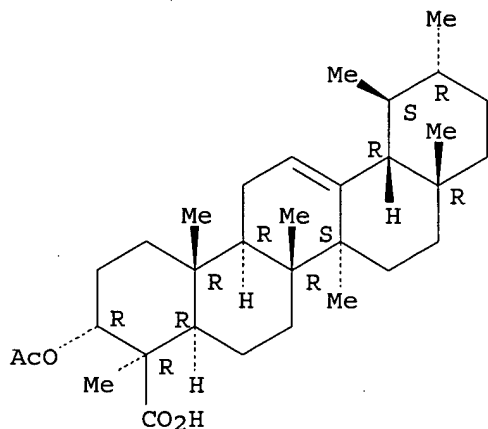
L9 1 S 631-69-6/RN  
SET NOTICE 1 DISPLAY  
SET NOTICE LOGIN DISPLAY

FILE 'CAPLUS' ENTERED AT 11:53:26 ON 18 JUL 2003

L10 2 S L7-L9 AND AUTOIMMUN?

L8 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
 RN 5968-70-7 REGISTRY  
 CN Urs-12-en-23-oic acid, 3-(acetyloxy)-, (3.alpha.,4.beta.)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Urs-12-en-24-oic acid, 3.alpha.-hydroxy-, acetate (6CI, 8CI)  
 OTHER NAMES:  
 CN .beta.-Boswellic acid acetate  
 CN 3-Acetyl-.beta.-boswellic acid  
 CN 3.alpha.-Acetoxyurs-12-en-24-oic acid  
 CN 3.alpha.-Acetyl-.beta.-boswellic acid  
 CN Acetyl-.beta.-boswellic acid  
 FS STEREOSEARCH  
 MF C32 H50 O4  
 CI COM  
 LC STN Files: BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CEN, CIN, NAPRALERT, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)

Absolute stereochemistry.

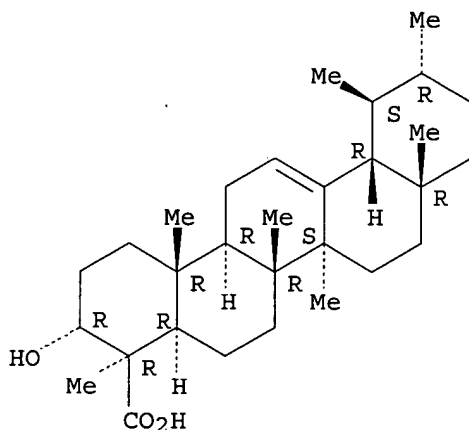


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

31 REFERENCES IN FILE CA (1957 TO DATE)  
 31 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
 RN 631-69-6 REGISTRY  
 CN Urs-12-en-23-oic acid, 3-hydroxy-, (3.alpha.,4.beta.)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN .beta.-Boswellic acid (6CI)  
 CN Urs-12-en-24-oic acid, 3.alpha.-hydroxy- (8CI)  
 OTHER NAMES:  
 CN 3.alpha.-Hydroxyurs-12-en-24-oic acid  
 FS STEREOSEARCH  
 MF C30 H48 O3  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CHEMCATS, CSCHM, DDFU, DRUGU, EMBASE, MEDLINE, MRCK\*, NAPRALERT, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

57 REFERENCES IN FILE CA (1957 TO DATE)  
 5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 57 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L7 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS

RN 129555-49-3 REGISTRY

CN Olean-12-en-23-oic acid, 3-(acetyloxy)-, (3.alpha.,4.beta.)-, mixt. with (3.alpha.,4.beta.)-3-(acetyloxy)urs-12-en-23-oic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Urs-12-en-23-oic acid, 3-(acetyloxy)-, (3.alpha.,4.beta.)-, mixt. contg. (9CI)

FS STEREOSEARCH

MF C32 H50 O4 . C32 H50 O4

CI MXS

SR CA

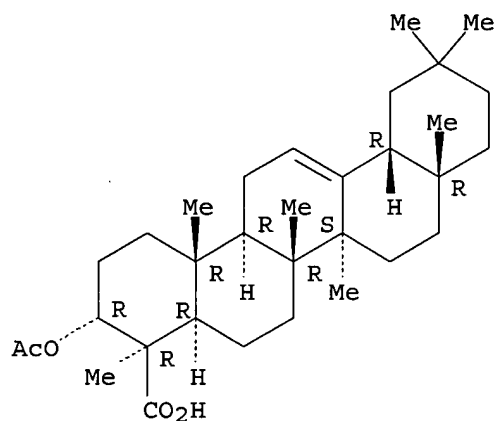
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

CRN 89913-60-0

CMF C32 H50 O4

Absolute stereochemistry.

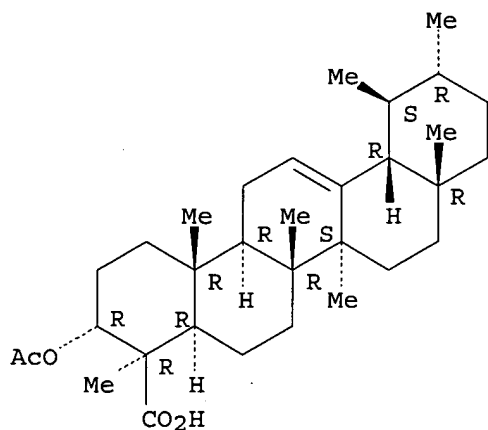


CM 2

CRN 5968-70-7

CMF C32 H50 O4

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1957 TO DATE)

> d his

(FILE 'HOME' ENTERED AT 14:03:48 ON 18 JUL 2003)

FILE 'MEDLINE' ENTERED AT 14:03:52 ON 18 JUL 2003

L1	0 S AUTOIMMU?(S) TOPOISMERASE
L2	17 S AUTOIMMU?(S) TOPOISOMERASE
L3	14 S L2 NOT PY>=1999
L4	1 S AUTOIMMU?(S) (TOPOISOMERASE(4A) INHIBIT?)
L5	317 S AUTOIMMU?(S) LEUKEMIA
L6	227 S L5 NOT PY>=1999
L7	2803 S AUTOIMMUNE(S) INFLAMMAT?

L7 ANSWER 5 OF 2803 MEDLINE

ACCESSION NUMBER: 2003330151 IN-PROCESS

DOCUMENT NUMBER: 22744073 PubMed ID: 12860579

TITLE: Causes of death in patients with celiac disease in a population-based Swedish cohort.

AUTHOR: Peters Ulrike; Askling Johan; Gridley Gloria; Ekbom Anders; Linet Martha

CORPORATE SOURCE: Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Department of Health and Human Services, Bethesda, MD 20892-7273, USA.. petersu@mail.nih.gov

SOURCE: ARCHIVES OF INTERNAL MEDICINE, (2003 Jul 14) 163 (13) 1566-72.

Journal code: 0372440. ISSN: 0003-9926.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: IN-PROCESS; NONINDEXED; Abridged Index Medicus Journals; Priority Journals

ENTRY DATE: Entered STN: 20030716

Last Updated on STN: 20030717

AB . . . were elevated for a wide array of diseases, including non-Hodgkin lymphoma (SMR, 11.4), cancer of the small intestine (SMR, 17.3), **autoimmune** diseases (including rheumatoid arthritis [SMR, 7.3] and diffuse diseases of connective tissue [SMR, 17.0]), allergic disorders (such as asthma [SMR, 2.8]), **inflammatory** bowel diseases (including ulcerative colitis and Crohn disease [SMR, 70.9]), diabetes mellitus (SMR, 3.0), disorders of immune deficiency (SMR, 20.9),. . .

AB BACKGROUND: Patients with celiac disease have an increased risk of death from gastrointestinal malignancies and lymphomas, but little is known about mortality from other causes and few studies have assessed long-term outcomes. METHODS: Nationwide data on 10 032 Swedish patients hospitalized from January 1, 1964, through December 31, 1993, with celiac disease and surviving at least 12 months were linked with the national mortality register. Mortality risks were computed as standardized mortality ratios (SMRs), comparing mortality rates of patients with celiac disease with rates in the general Swedish population. RESULTS: A total of 828 patients with celiac disease died during the follow-up period (1965-1994). For all causes of death combined, mortality risks were significantly elevated: 2.0-fold (95% confidence interval [CI], 1.8-2.1) among all patients with celiac disease and 1.4-fold (95% CI, 1.2-1.6) among patients with celiac disease with no other discharge diagnoses at initial hospitalization. The overall SMR did not differ by sex or calendar year of initial hospitalization, whereas mortality risk in patients hospitalized with celiac disease before the age of 2 years was significantly lower by 60% (95% CI, 0.2-0.8) compared with the same age group of the general population. Mortality risks were elevated for a wide array of diseases, including non-Hodgkin lymphoma (SMR, 11.4), cancer of the small intestine (SMR, 17.3), **autoimmune** diseases (including rheumatoid arthritis [SMR, 7.3] and diffuse diseases of connective tissue [SMR, 17.0]), allergic disorders (such as asthma [SMR, 2.8]), **inflammatory** bowel diseases (including ulcerative colitis and Crohn disease [SMR, 70.9]), diabetes mellitus (SMR, 3.0), disorders of immune deficiency (SMR, 20.9), tuberculosis (SMR, 5.9), pneumonia (SMR, 2.9), and nephritis (SMR, 5.4). CONCLUSION: The elevated mortality risk for all causes of death combined reflected, for the most part, disorders characterized by immune dysfunction.

=> s 17-19 and autoimmun?

1 L7

31 L8

57 L9

32732 AUTOIMMUN?

L10 2 (L7 OR L8 OR L9) AND AUTOIMMUN?

=> d ibib kwic 1-2

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:790300 CAPLUS

DOCUMENT NUMBER: 133:344638

TITLE: Compositions of boswellic acids derived from Boswellia serrata gum resin, for treating lymphoproliferative and **autoimmune** conditions

INVENTOR(S): Majeed, Muhammed; Badmaev, Vladimir

PATENT ASSIGNEE(S): Sabinsa Corporation, USA

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066111	A1	20001109	WO 2000-US8217	20000428
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1173162	A1	20020123	EP 2000-925882	20000428
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002543125	T2	20021217	JP 2000-614996	20000428
PRIORITY APPLN. INFO.:			US 1999-302510	A 19990430
			WO 2000-US8217	W 20000428
REFERENCE COUNT:	8			
				THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI				Compositions of boswellic acids derived from Boswellia serrata gum resin, for treating lymphoproliferative and <b>autoimmune</b> conditions
AB				Method of treatment of lymphoproliferative and <b>autoimmune</b> disorders with a new compn. of four boswellic acids including .beta.-boswellic acid, 3-O-acetyl-.beta.-boswellic acid, 11-keto-.beta.-boswellic acid, and 3-O-acetyl-11-keto-.beta.-boswellic acid. Boswellic acids of invention have been obtained in a novel industrial process from the gum resin of Boswellia serrata tree, providing standardized compn. which inhibits DNA, RNA and protein synthesis of the target cell without cytotoxic effects. Compn. of invention provides advantage of irreversible cytostatic therapy, equiv. to biol. effects of a cytotoxic therapy without killing body cells.
ST				boswellic acid Boswellia gum antiproliferative agent; antitumor boswellic acid Boswellia gum; <b>autoimmune</b> disorder boswellic acid Boswellia gum
IT				Intestine, disease (Crohn's; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and <b>autoimmune</b> conditions)
IT				Alcohols, uses RL: NUU (Other use, unclassified); USES (Uses)

*Having the compounds*

(C1-6; extn. of boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Kidney, disease  
(Goodpasture's syndrome; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Anemia (disease)  
(**autoimmune** hemolytic anemia; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Thyroid gland, disease  
(**autoimmune** thyroiditis; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Addison's disease  
Antidiabetic agents  
Antirheumatic agents  
**Autoimmune** disease  
Graves' disease  
Myasthenia gravis  
Psoriasis  
Salai (Boswellia serrata)  
Sarcoidosis  
(boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Purpura (disease)  
(idiopathic thrombocytopenic; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Hypoparathyroidism  
(idiopathic; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Translation, genetic  
(inhibition of; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT DNA  
RNA  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(inhibition of; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Diabetes mellitus  
(insulin-dependent; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Diabetes mellitus  
(insulin-resistant; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Antitumor agents  
(leukemia; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Antitumor agents  
(lymphoma; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Resins  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(olibanum, Salai guggal, Boswellia serrata gum; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Connective tissue  
(scleroderma; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Extraction  
(supercrit.; extn. of boswellic acids from Boswellia serrata gum for



treating lymphoproliferative and **autoimmune** conditions)

IT Lupus erythematosus  
(systemic; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT Thyroid gland, disease  
(thyroiditis, silent; boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT 631-69-6, .beta.-Boswellic acid 5968-70-7 17019-92-0  
67416-61-9  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

IT 67-63-0, Isopropanol, uses 124-38-9, Carbon dioxide, uses 141-78-6, Ethyl acetate, uses 1310-58-3, Potassium hydroxide, uses 7647-01-0, Hydrochloric acid, uses  
RL: NUJ (Other use, unclassified); USES (Uses)  
(extn. of boswellic acids from Boswellia serrata gum for treating lymphoproliferative and **autoimmune** conditions)

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:109686 CAPLUS

DOCUMENT NUMBER: 118:109686

TITLE: Complement inhibitors containing .beta.-boswellic acid (derivatives)

INVENTOR(S): Hayashi, Koji; Mihashi, Hiroshi; Ueda, Tomoko; Nagasawa, Shigeharu

PATENT ASSIGNEE(S): Tsumura and Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04288095	A2	19921013	JP 1991-20308	19910122
PRIORITY APPLN. INFO.:			JP 1991-20308	19910122

AB Complement inhibitors, useful for treatment of **autoimmune** diseases, etc., contain .beta.-boswellic acid (derivs.) I (R1, R2 = H, .alpha.-OH; R1R2 may be O; R3 = H, Ac) or their pharmacol. acceptable salts as active ingredients. Petroleum ether ext. (117 g) of Boswellia was subjected to chromatog. to isolate 220 mg .alpha.-boswellic acid acetate and 280 mg .beta.-boswellic acid acetate (II). II (400 mg) was refluxed with 5% KOH-MeOH for 8 h to give 288 mg .beta.-boswellic acid (III). III (at 50 .mu.M) significantly inhibited the activity of complement by the Mayer's method. Tablets contg. corn starch 44, cryst. cellulose 40, CMC-Ca 5, SiO2 0.5, Mg stearate 0.5, and III 10 g were formulated.

IT **Autoimmune** disease  
(treatment of, complement inhibitor .beta.-boswellic acid (derivs.) for)

IT 5968-70-7 67416-61-9 146019-25-2  
RL: BIOL (Biological study)  
(complement inhibitor, from Boswellia)

IT 631-69-6P, .beta.-Boswellic acid 17019-92-0P 21087-14-9P  
146019-26-3P  
RL: PREP (Preparation)  
(prepn. of, as complement inhibitor)

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER: 854709 EUROPATFULL EW 200115 FS PS  
 TITLE: USE OF **BOSWELLIC** ACID AND ITS DERIVATIVES FOR  
 INHIBITING NORMAL AND INCREASED LEUCOCYTIC ELASTASE OR  
 PLASMIN ACTIVITY.  
 VERWENDUNG VON **BOSWELLIASAEURE** UND IHREN  
 DERIVATEN ZUR HEMMUNG DER NORMALEN UND GESTEIGERTEN  
 LEUKOZYTENELASTASE- ODER PLASMINAKTIVITAET.  
 UTILISATION D'ACIDE DE **BOSWELL** ET DE SES  
 DERIVES POUR INHIBER L'ACTIVITE NORMALE OU ACCRUE DE  
 L'ELASTASE LEUCOCYTAIRE OU DE LA PLASMINE.  
 INVENTOR(S): AMMON, Hermann, P., T., Im Kleeacker 30, D-72072  
 Tuebingen, DE;  
 SAFAYHI, Hasan, Eichenweg 5, D-72076  
 Tuebingen, DE  
 PATENT ASSIGNEE(S): AMMON, Hermann P.T., Im Kleeacker 30, 72072 Tuebingen,  
 DE  
 PATENT ASSIGNEE NO: 387930  
 AGENT: Weisert, Annekaete, Dipl.-Ing. Dr.-Ing. et al.,  
 Patentanwaelte Kraus & Weisert Thomas-Wimmer-Ring 15,  
 80539 Muenchen, DE  
 AGENT NUMBER: 12881  
 OTHER SOURCE: BEPB2001015 EP 0854709 B1 0014  
 SOURCE: Wila-EPS-2001-H15-T1  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Anmeldung in Deutsch; Veroeffentlichung in Deutsch  
 DESIGNATED STATES: R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R  
 IE; R LI; R LU; R NL; R PT; R SE  
 PATENT INFO.PUB.TYPE: EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale  
 Anmeldung)  
 PATENT INFORMATION:

	PATENT NO	KIND DATE
	EP 854709	B1 20010411
'OFFENLEGUNGS' DATE:		19980729
APPLICATION INFO.:	EP 1996-929309	19960822
PRIORITY APPLN. INFO.:	DE 1995-19531067	19950823
RELATED DOC. INFO.:	WO 96-EP3705	960822 INTAKZ
	WO 9707796	970306 INTPNR
REFERENCE PAT. INFO.:	EP 552657 A	
REF. NON-PATENT-LIT.:	INT. J. IMMUNOPHARMACOL., Bd. 14, Nr. 7, 1992, Seiten 1139-1143, XP000570505 A. KAPIL ET AL.: "Anticomplementary activity of boswellic acid: an inhibitor of C3-convertase of the classical complement pathway." INT. J. IMMUNOPHARMACOL., Bd. 11, Nr. 6, 1989, Seiten 647-652, XP000572594 M.L. SHARMA ET AL.: "Anti-arthritis activity of boswellic acids in bovine serum albumin(BSA)-induced arthritis." ANN. REV. MED., Bd. 36, 1985, Seiten 207-216, XP000570622 A. JANOFF: "Elastase in tissue injury." in der Anmeldung erwahnt	

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 552657 EUROPATFULL EW 199330 FS OS STA B  
 TITLE: Use of pure **Boswellic** acid.  
 Verwendung von reiner **Boswelliasaeure**.  
 Utilisation de l'acide **boswellique** pur.  
 INVENTOR(S): Ammon, Hermann P. T., Prof. Dr. med., Im Kleeacker 30,  
 W-7400 Tuebingen, DE;

**Safayhi, Hasan, Dr. Chem.,**  
 Eichenweg 5, W-7400 Tuebingen,  
 DE;  
**Singh, G.B., Dr. Chem., E.P. 441 Talab Khatika,**  
 Jammu-Tawi 180 001, IN  
 PATENT ASSIGNEE(S): AMMON, Hermann P.T., Im Kleeacker 30, W-7400 Tuebingen,  
 DE  
 PATENT ASSIGNEE NO: 387930  
 AGENT: Kraus, Walter, Dr., Patentanwaelte Kraus, Weisert &  
 Partner Thomas-Wimmer-Ring 15, W-8000 Muenchen 22, DE  
 AGENT NUMBER: 7061  
 OTHER SOURCE: ESP1993049 EP 0552657 A1 930728  
 SOURCE: Wila-EPZ-1993-H30-T1b  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Anmeldung in Deutsch; Veroeffentlichung in Deutsch  
 DESIGNATED STATES: R AT; R BE; R CH; R DE; R DK; R ES; R FR; ~~R GB;~~ ~~R GR;~~ R  
 IE; R IT; R LI; R NL; R PT; R SE  
 PATENT INFO.PUB.TYPE: EPA1 EUROPAEISCHE PATENTANMELDUNG  
 PATENT INFORMATION:

PATENT NO	KIND	DATE
EP 552657	A1	19930728
		19930728
EP 1993-100398		19930113
DE 1992-4201903		19920124

'OFFENLEGUNGS' DATE:

L4 ANSWER 3 OF 6 PATDPAFULL COPYRIGHT 2003 DPMA

ZUGRIFFSNUMMER: DE10035591 PATDPAFULL ED 20021107 EW 200205  
 TITEL: Verfahren zur Isolierung von tetra-und pentacyclischen  
 Triterpensaeuren  
 ERFINDER: **Safayhi, Hasan, Dr., 72076 Tuebingen, DE;**  
 Schweizer, Stephan, 72070 Tuebingen, DE;  
 Ammon, Hermann P.T., Prof. Dr. med., 72072 Tuebingen,  
 DE  
 ANMELDER: Safayhi, Hasan, Dr., 72076 Tuebingen, DE  
 VERTRETER: Patent- und Rechtsanwaelte Kraus & Weisert, 80539  
 Muenchen  
 DOKUMENTENART: Patent  
 SPRACHE: German  
 PUBLIKATIONSART: DEA1 DE-Offenlegungsschrift

	NUMMER	ART	DATUM
PUBL. INFORMATION:	DE 10035591	A1	20020131
ANMELDEINFORMATION:	DE 2000-10035591	A	20000721
PRIOR. ANMELDEINFO.:	DE 2000-10035591		20000721

L4 ANSWER 4 OF 6 PATDPAFULL COPYRIGHT 2003 DPMA

ZUGRIFFSNUMMER: DE19531067 PATDPAFULL ED 20021009 EW 199709  
 TITEL: Verwendung von **Boswelliasaeure** und ihren  
 Derivaten zur Hemmung der normalen und gesteigerten  
 Leukozytenelastase- oder Plasminaktivitaet  
 ERFINDER: Ammon, Hermann P.T., Prof. Dr.med., 72072 Tuebingen,  
 DE;  
**Safayhi, Hasan, Dr., 72076 Tuebingen, DE**  
 ANMELDER: Ammon, Hermann P.T., Prof. Dr.med., 72072 Tuebingen, DE  
 VERTRETER: W. Kraus und Kollegen, 80539 Muenchen  
 DOKUMENTENART: Patent  
 SPRACHE: German  
 PUBLIKATIONSART: DEA1 DE-Offenlegungsschrift

NUMMER	ART	DATUM
--------	-----	-------

PUBL. INFORMATION:	DE 19531067	A1 19970227
ANMELDEINFORMATION:	DE 1995-19531067	A 19950823
PRIOR. ANMELDEINFO.:	DE 1995-19531067	19950823

L4 ANSWER 5 OF 6 PCTFULL COPYRIGHT 2003 Univentio  
 ACCESSION NUMBER: 1997007796 PCTFULL ED 20020514  
 TITLE (ENGLISH): USE OF **BOSWELIC** ACID AND ITS DERIVATIVES FOR  
 INHIBITING NORMAL AND INCREASED LEUCOCYTIC ELASTASE OR  
 PLASMIN ACTIVITY  
 TITLE (FRENCH): UTILISATION D'ACIDE DE **BOSWELL** ET DE SES  
 DERIVES POUR INHIBER L'ACTIVITE NORMALE OU ACCRUE DE  
 L'ELASTASE LEUCOCYTAIRE OU DE LA PLASMINE  
 INVENTOR(S): AMMON, Hermann, P., T.;  
**SAFAYHI, Hasan**  
 PATENT ASSIGNEE(S): AMMON, Hermann, P., T.;  
**SAFAYHI, Hasan**  
 LANGUAGE OF PUBL.: German  
 DOCUMENT TYPE: Patent  
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9707796	A1	19970306

DESIGNATED STATES  
 W: JP US AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT  
 SE  
 APPLICATION INFO.: WO 1996-EP3705 A 19960822  
 PRIORITY INFO.: DE 1995-195 31 067.5 19950823

L4 ANSWER 6 OF 6 USPATFULL  
 ACCESSION NUMBER: 2002:17288 USPATFULL  
 TITLE: USE OF **BOSWELIC** ACID AND ITS DERIVATIVES FOR  
 INHIBITING NORMAL AND INCREASED LEUCOCYTIC ELASTASE OR  
 PLASMIN ACTIVITY  
 INVENTOR(S): AMMON, HERMANN P.T., TUBINGEN, GERMANY, FEDERAL  
 REPUBLIC OF  
**SAFAYHI, HASAN**, TUBINGEN, GERMANY, FEDERAL  
 REPUBLIC OF

NUMBER	KIND	DATE
US 2002010168	A1	20020124
US 1998-11977	A1	19980615 (9)
WO 1996-EP3705		19960422

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1995-19531067	19950823
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BURNS DOANE SWECKER & MATHIS L L P, POST OFFICE BOX 1404, ALEXANDRIA, VA, 22313-1404	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	623	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

*Assignee search*

=> s e3-e5

L1 27 (SABINSA/PA OR "SABINSA CORP., PISCATAWAY, N.J., US"/PA OR "SABINSA CORPORATION"/PA)

=> s l1 and boswell?

L2 9 L1 AND BOSWELL?

=> d ibib 1-9

L2 ANSWER 1 OF 9 EUROPATFULL COPYRIGHT 2003 WILA

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER: 810868 EUROPATFULL EW 200135 FS PS  
TITLE: USE OF PIPERINE AS A GASTROINTESTINAL ABSORPTION  
ENHANCER.  
VERWENDUNG VON PIPERINE ZUR VERBESSERUNG DER  
GASTROINTESTINALEN ABSORPTION.  
UTILISATION DE LA PIPERINE POUR AUGMENTER L'ABSORPTION  
GASTROINTESTINALE.  
INVENTOR(S): MAJEED, Muhammed, Unit 6 121 Ethel Road West,  
Piscataway, NJ 08854, US;  
BADMAEV, Vladimir, Unit 6 121 Ethel Road West,  
Piscataway, NJ 08854, US;  
RAJENDRAN, R., Jayanagar Eastend, 1382 Southend Main  
Road, 9th Block, Bangalore 560 069, IN  
PATENT ASSIGNEE(S): **Sabinsa Corporation**, Unit 6, 121  
Ethel Road West, Piscataway, NJ 08854, US  
PATENT ASSIGNEE NO: 2199040  
AGENT: Huber, Bernhard, Dipl.-Chem. et al., Weickmann &  
Weickmann Patentanwaelte Kopernikusstrasse 9, 81679  
Muenchen, DE  
AGENT NUMBER: 5835  
OTHER SOURCE: BEPB2001037 EP 0810868 B1 0020  
SOURCE: Wila-EPS-2001-H35-T1  
DOCUMENT TYPE: Patent  
LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch  
DESIGNATED STATES: R AT; R BE; R CH; R DE; R DK; R ES; R FR; R GB; R GR; R  
IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE  
PATENT INFO.PUB.TYPE: EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale  
Anmeldung)  
PATENT INFORMATION:  
PATENT NO KIND DATE  
-----  
EP 810868 B1 20010829  
'OFFENLEGUNGS' DATE: 19971210  
APPLICATION INFO.: EP 1995-939489 19951106  
PRIORITY APPLN. INFO.: US 1995-393738 19950224  
US 1995-550496 19951030  
RELATED DOC. INFO.: WO 95-US12758 951106 INTAKZ  
WO 9625939 960829 INTPNR  
REFERENCE PAT. INFO.: US 4284657 A  
REF. NON-PATENT-LIT.: C. K. ATAL ET AL.: "SCIENTIFIC EVIDENCE ON THE ROLE OF  
AYURVEDIC HERBALS ON BIOAVAILABILITY OF DRUGS" JOURNAL  
OF ETHNOPHARMACOLOGY, vol. 4, no. 2, September 1981,  
pages 229-232, XP002077891 R. K. JOHRI ET AL.: "AN  
AYURVEDIC FORMULATION 'TRIKATU' AND ITS CONSTITUENTS."  
JOURNAL OF ETHNOPHARMACOLOGY, vol. 37, no. 2, September  
1992, pages 85-91, XP002077892 C. K. MATHAI: "A MODIFIED  
EXTRACTION AND ESTIMATION METHOD OF OLEORESIN AND  
PIPERINE IN BLACK PEPPER (PIPER NIGRUM L.) BERRIES."  
INDIAN SPICES, vol. 25, no. 2/3, 1988, pages 3-5,  
XP002077893 CHEMICAL ABSTRACTS, No. 110:6454, WOOD et  
al., "Piperine Determination in Pepper and Its

Oleoresins-a Reversed-Phase High Performance Liquid  
Chromatographic Method"; & FLAVOUR FRAGRANCE JOURNAL,  
Vol. 3(2), issued 1988, 55-64

L2 ANSWER 2 OF 9 PATDPAFULL COPYRIGHT 2003 DPMA

ZUGRIFFSNUMMER: DE69522477 PATDPAFULL ED 20021107 EW 200222  
TITEL: VERWENDUNG VON PIPERINE ZUR VERBESSERUNG DER  
GASTROINTESTINALEN ABSORPTION  
ERFINDER: MAJEED, Muhammed, Piscataway, US;  
BADMAEV, Vladimir, Piscataway, US;  
RAJENDRAN, R., Bangalore 560 069, IN  
ANMELDER: **Sabinsa Corp., Piscataway, N.J., US**  
VERTRETER: Weickmann & Weickmann, 81679 Muenchen  
DOKUMENTENART: Patent  
SPRACHE: German  
ANMELDESPRACHE: English  
PUBLIKATIONSART: DET2 DE-Publikation der uebersetzten EP-Patentschrift  
EPA EP-Publikation der EP-Patentanmeldung  
EPB EP-Publikation der EP-Patentschrift  
WOA WO-Publikation der PCT-Patentanmeldung

	NUMBER	ART	DATUM
PUBL. INFORMATION:	DE 69522477	T2	20020529
	EP 810868	A	19971210
	EP 810868	B	20010829
	WO 9625939	A	19960829
ANMELDEINFORMATION:	DE 1995-69522477	E	19951106
	EP 1995-939489	A	19951106
PRIOR. ANMELDEINFO.:	US 1995-393738		19950224
	US 1995-550496		19951030

L2 ANSWER 3 OF 9 PCTFULL COPYRIGHT 2003 Univentio  
ACCESSION NUMBER: 2002066491 PCTFULL ED 20020910 EW 200235  
TITLE (ENGLISH): WATER SOLUBLE **BOSWELLIC** ACIDS, THEIR  
PREPARATION AND USE FOR TREATING INFLAMMATORY  
CONDITIONS  
TITLE (FRENCH): ACIDES **BOSWELLIQUES** HYDROSOLUBLES, MODE  
D'OBTENTION ET UTILISATION CONTRE DES ETATS  
INFLAMMATOIRES  
INVENTOR(S): MAJEED, Muhammed, Sabinsa Corporation, Unite #6, 121  
Ethel Road West, Piscataway, NJ 08854, US;  
BADMAEV, Vladimir, Sabinsa Corporation, Unite #6, 121  
Ethel Road West, Piscataway, NJ 08854, US  
PATENT ASSIGNEE(S): **SABINSA CORPORATION, 121 Ethel Road West, Unit #6,  
Piscataway, NJ 08854, US [US, US]**  
AGENT: MURRAY, Robert, B.\$, Arent Fox Kintner Plotkin & Kahn,  
PLLC, Suite 400, 1050 Connecticut Avenue, N.W.,  
Washington, DC 20036\$, US  
LANGUAGE OF FILING: English  
LANGUAGE OF PUBL.: English  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

	NUMBER	KIND	DATE
DESIGNATED STATES	WO 2002066491	A1	20020829
W:	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW		
RW (ARIPO):	GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW		

RW (EAPO): AM AZ BY KG KZ MD RU TJ TM  
 RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 TR  
 RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
 APPLICATION INFO.: WO 2002-US3384 A 20020215  
 PRIORITY INFO.: US 2001-60/268,713 20010215

L2 ANSWER 4 OF 9 PCTFULL COPYRIGHT 2003 Univentio  
 ACCESSION NUMBER: 2001089571 PCTFULL ED 20020826  
 TITLE (ENGLISH): METHOD OF INCREASED BIOAVAILABILITY OF NUTRIENTS AND  
 PHARMACEUTICAL PREPARATIONS WITH TETRAHYDROPIPERINE AND  
 ITS ANALOGUES AND DERIVATIVES  
 TITLE (FRENCH): METHODE PERMETTANT D'AUGMENTER LA BIODISPONIBILITE DE  
 NUTRIMENTS ET PREPARATIONS PHARMACEUTIQUES RENFERMANT  
 DE LA TETRAHYDROPIPERINE ET DES ANALOGUES ET DERIVES DE  
 TETRAHYDROPIPERINE  
 INVENTOR(S): MAJEED, Muhammed;  
 BADMAEV, Vladimir;  
 BAMMI, Kumar, Rajinder;  
 PRAKASH, Subbalakshmi;  
 NATARAJAN, Sankaran  
 PATENT ASSIGNEE(S): **SABINSA CORPORATION;**  
 SAMI CHEMICALS &EXTRACTS (P) LTD.  
 DOCUMENT TYPE: Patent  
 PATENT INFORMATION:

NUMBER	KIND	DATE
-----		
WO 2001089571	A2	20011129

DESIGNATED STATES  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
 CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
 IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
 MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
 TJ TM TR TT TZ UA UG UZ VN YU ZA ZW GH GM KE LS MW MZ  
 SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
 CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ  
 CF CG CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2001-US16070 A 20010521  
 PRIORITY INFO.: US 2000-60/205,245 20000519  
 US 2001-60/277,979 20010323

L2 ANSWER 5 OF 9 PCTFULL COPYRIGHT 2003 Univentio  
 ACCESSION NUMBER: 2000066111 PCTFULL ED 20020515  
 TITLE (ENGLISH): COMPOSITIONS OF **BOSWELLIC** ACIDS DERIVED FROM  
**BOSWELLIA** SERRATA GUM RESIN, FOR TREATING  
 LYMPHOPROLIFERATIVE AND AUTOIMMUNE CONDITIONS  
 TITLE (FRENCH): COMPOSITIONS A BASE D'ACIDES **BOSWELLIQUES**,  
 DERIVEES DE GOMME-RESINE DE **BOSWELLIA** SERRATA  
 ET DESTINEES A TRAITER DES ETATS LYMPHOPROLIFERATIFS ET  
 AUTO-IMMUNS  
 INVENTOR(S): MAJEED, Muhammed;  
 BADMAEV, Vladimir  
 PATENT ASSIGNEE(S): **SABINSA CORPORATION;**  
 MAJEED, Muhammed;  
 BADMAEV, Vladimir  
 LANGUAGE OF PUBL.: English  
 DOCUMENT TYPE: Patent  
 PATENT INFORMATION:

NUMBER	KIND	DATE
-----		
WO 2000066111	A1	20001109

DESIGNATED STATES  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ  
 DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS

JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN  
 MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
 TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ  
 UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES  
 FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA  
 GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2000-US8217 A 20000428  
 PRIORITY INFO.: US 1999-09/302,510 19990430

L2 ANSWER 6 OF 9 PCTFULL COPYRIGHT 2003 Univentio  
 ACCESSION NUMBER: 1996025939 PCTFULL ED 20020514  
 TITLE (ENGLISH): USE OF PIPERINE AS A BIOAVAILABILITY ENHANCER  
 TITLE (FRENCH): UTILISATION DE LA PIPERINE POUR AUGMENTER LA  
 BIODISPONIBILITE  
 INVENTOR(S): MAJEED, Muhammed;  
 BADMAEV, Vladimir;  
 RAJENDRAN, R.  
 PATENT ASSIGNEE(S): **SABINSA CORPORATION**;  
 MAJEED, Muhammed;  
 BADMAEV, Vladimir;  
 RAJENDRAN, R.  
 LANGUAGE OF PUBL.: English  
 DOCUMENT TYPE: Patent  
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9625939	A1	19960829

DESIGNATED STATES  
 W:

AL AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB  
 GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK  
 MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA  
 UG US UZ VN KE LS MW SD SZ UG AT BE CH DE DK ES FR GB  
 GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR  
 NE SN TD TG

APPLICATION INFO.: WO 1995-US12758 A 19951106  
 PRIORITY INFO.: US 1995-8/393,738 19950224  
 US 1995-8/550,496 19951030

L2 ANSWER 7 OF 9 USPATFULL

ACCESSION NUMBER: 1999:132273 USPATFULL  
 TITLE: Use of piperine as a bioavailability enhancer  
 INVENTOR(S): Majeed, Muhammed, Piscataway, NJ, United States  
 Badmaev, Vladimir, Piscataway, NJ, United States  
 Rajendran, R., Bangalore, India  
 PATENT ASSIGNEE(S): **Sabinsa Corporation**, Piscataway, NJ, United  
 States (U.S. corporation)

NUMBER	KIND	DATE
US 5972382		19991026
US 1998-5594		19980112 (9)

PATENT INFORMATION: US 5972382 19991026  
 APPLICATION INFO.: US 1998-5594 19980112 (9)  
 RELATED APPLN. INFO.: Division of Ser. No. US 1995-550496, filed on 30 Oct  
 1995, now patented, Pat. No. US 5744161 which is a  
 continuation-in-part of Ser. No. US 1995-393738, filed  
 on 24 Feb 1995, now patented, Pat. No. US 5536506  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Azpuru, Carlos A.  
 LEGAL REPRESENTATIVE: Nikaido Marmelstein Murray & Oram, LLP  
 NUMBER OF CLAIMS: 60  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)  
 LINE COUNT: 1159  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.



## L2 ANSWER 8 OF 9 USPATFULL

ACCESSION NUMBER: 1998:44905 USPATFULL  
TITLE: Use of piperine as a bioavailability enhancer  
INVENTOR(S): Majeed, Muhammed, Piscataway, NJ, United States  
Badmaev, Vladimir, Piscataway, NJ, United States  
Rajendran, Ramaswamy, Jayanagar Eastend, India  
PATENT ASSIGNEE(S): Sabinsa Corporation, Piscataway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5744161		19980428
APPLICATION INFO.:	US 1995-550496		19951030 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1995-393738, filed on 24 Feb 1995, now patented, Pat. No. US 5536506		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Azpuru, Carlos A.		
LEGAL REPRESENTATIVE:	Nikaído, Marmelstein, Murray & Oram LLP		
NUMBER OF CLAIMS:	35		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	991		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

## L2 ANSWER 9 OF 9 USPATFULL

ACCESSION NUMBER: 96:62898 USPATFULL  
TITLE: Use of piperine to increase the bioavailability of nutritional compounds  
INVENTOR(S): Majeed, Muhammed, Piscataway, NJ, United States  
Badmaev, Vladimir, Piscataway, NJ, United States  
Rajendran, R., Bangalore, India  
PATENT ASSIGNEE(S): Sabinsa Corporation, Piscataway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5536506		19960716
APPLICATION INFO.:	US 1995-393738		19950224 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Azpuru, Carlos		
LEGAL REPRESENTATIVE:	Nikaído, Marmelstein, Murray & Oram		
NUMBER OF CLAIMS:	28		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	571		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 9 ibib clm

## L2 ANSWER 9 OF 9 USPATFULL

ACCESSION NUMBER: 96:62898 USPATFULL  
TITLE: Use of piperine to increase the bioavailability of nutritional compounds  
INVENTOR(S): Majeed, Muhammed, Piscataway, NJ, United States  
Badmaev, Vladimir, Piscataway, NJ, United States  
Rajendran, R., Bangalore, India  
PATENT ASSIGNEE(S): Sabinsa Corporation, Piscataway, NJ, United States (U.S. corporation)

NUMBER	KIND	DATE
--------	------	------

PATENT INFORMATION: US 5536506 19960716  
APPLICATION INFO.: US 1995-393738 19950224 (8)  
DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Azpuru, Carlos  
LEGAL REPRESENTATIVE: Nikaido, Marmelstein, Murray & Oram  
NUMBER OF CLAIMS: 28  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)  
LINE COUNT: 571  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
CLM What is claimed is:  
1. A com

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:109686 CAPLUS

DOCUMENT NUMBER: 118:109686

TITLE: Complement inhibitors containing .beta.-boswellic acid (derivatives)

INVENTOR(S): Hayashi, Koji; Mihashi, Hiroshi; Ueda, Tomoko; Nagasawa, Shigeharu

PATENT ASSIGNEE(S): Tsumura and Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04288095	A2	19921013	JP 1991-20308	19910122
PRIORITY APPLN. INFO.:			JP 1991-20308	19910122

AB Complement inhibitors, useful for treatment of **autoimmune** diseases, etc., contain .beta.-boswellic acid (derivs.) I (R1, R2 = H, .alpha.-OH; R1R2 may be O; R3 = H, Ac) or their pharmacol. acceptable salts as active ingredients. Petroleum ether ext. (117 g) of Boswellia was subjected to chromatog. to isolate 220 mg .alpha.-boswellic acid acetate and 280 mg .beta.-boswellic acid acetate (II). II (400 mg) was refluxed with 5% KOH-MeOH for 8 h to give 288 mg .beta.-boswellic acid (III). III (at 50 .mu.M) significantly inhibited the activity of complement by the Mayer's method. Tablets contg. corn starch 44, cryst. cellulose 40, CMC-Ca 5, SiO2 0.5, Mg stearate 0.5, and III 10 g were formulated.

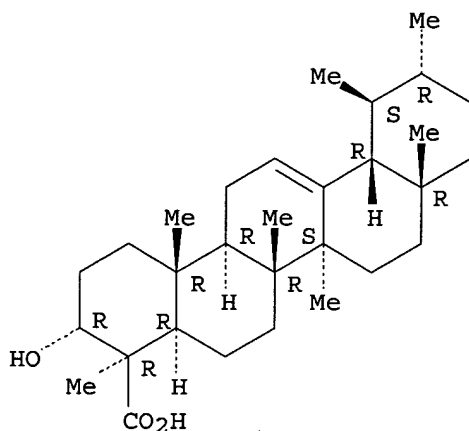
IT **Autoimmune** disease  
(treatment of, complement inhibitor .beta.-boswellic acid (derivs.) for)

IT **5968-70-7** 67416-61-9 146019-25-2  
RL: BIOL (Biological study)  
(complement inhibitor, from Boswellia)

IT **631-69-6P**, .beta.-Boswellic acid 17019-92-0P 21087-14-9P  
146019-26-3P  
RL: PREP (Preparation)  
(prepn. of, as complement inhibitor)

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
 RN 631-69-6 REGISTRY  
 CN Urs-12-en-23-oic acid, 3-hydroxy-, (3.alpha.,4.beta.)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN .beta.-Boswellic acid (6CI)  
 CN Urs-12-en-24-oic acid, 3.alpha.-hydroxy- (8CI)  
 OTHER NAMES:  
 CN 3.alpha.-Hydroxyurs-12-en-24-oic acid  
 FS STEREOSEARCH  
 MF C30 H48 O3  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MRCK\*, NAPRALERT, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)

Absolute stereochemistry.

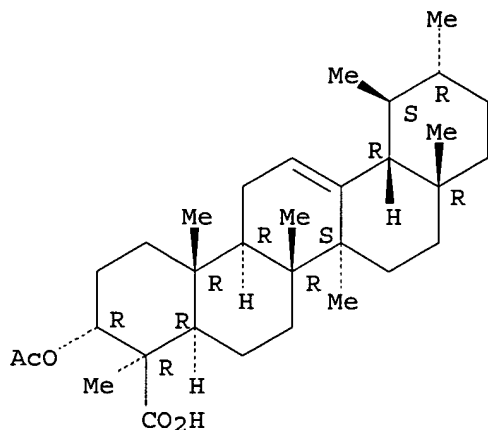


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

57 REFERENCES IN FILE CA (1957 TO DATE)  
 5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 57 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L8 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
 RN 5968-70-7 REGISTRY  
 CN Urs-12-en-23-oic acid, 3-(acetyloxy)-, (3.alpha.,4.beta.)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Urs-12-en-24-oic acid, 3.alpha.-hydroxy-, acetate (6CI, 8CI)  
 OTHER NAMES:  
 CN .beta.-Boswellic acid acetate  
 CN 3-Acetyl-.beta.-boswellic acid  
 CN 3.alpha.-Acetoxurs-12-en-24-oic acid  
 CN 3.alpha.-Acetyl-.beta.-boswellic acid  
 CN Acetyl-.beta.-boswellic acid  
 FS STEREOSEARCH  
 MF C32 H50 O4  
 CI COM  
 LC STN Files: BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CEN, CIN, NAPRALERT, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

31 REFERENCES IN FILE CA (1957 TO DATE)  
 31 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)